State of California
DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT
CSD 700 (Rev. 08/25/11)

COMBUSTION APPLIANCE SAFETY INSPECTION FORM (CASIF)

Client: _____ Date: _____

Address: _____ City: _____

Agency:_____ Home Type: ☐-SF, ☐-MF, ☐-M/H

► ☐ **ECIP Furnace Only (No Wx)**—Complete (A)–(D) & attach "Post-Repair/Replacement" Form.

► Forms attached: ☐ **Additional Appliance,** ☐ **Interim Tests,** ☐ **Post-Repair/Replace**

❑ ***SERVICE REQUIRED***
Date:_____

❑ **CORRECTED**
Date:_____

(A) *IMMEDIATE SERVICE REQUIRED* (Z-1)

[CAS Tester Model:_____ ID #_____]

Appliance and description of problem	Repairs made • By whom • Date

(B) REQUIRED REPAIRS (Z-2)

Appliance and description of problem	Repairs made • By whom • Date

(C) FINAL TEST RESULTS ↓ (see L-5)

Step F-3(c): Second *Living Space* Ambient CO: _____ ppm

APPLIANCE	Not Applicable	CO (ppm for each burner/port)	DRAFT	SPILLAGE	COMB. AIR
Main Heater*	NA	_____, _____, _____, _____	– ____iwc / Pa P F NA	Y N NA	IN OUT OK
Other Heater*	NA	_____, _____, _____, _____	– ____iwc / Pa P F NA	Y N NA	IN OUT OK
Gas: Log FP	NA	_____, _____, _____, _____	– ____iwc / Pa P F NA	Y N NA	IN OUT OK
	NA	_____, _____, _____, _____	– ____iwc / Pa P F NA	Y N NA	IN OUT OK
Water Heater*	NA	_____	– ____iwc / Pa P F NA	Y N NA	IN OUT OK
Cook Top	NA	CO ppm: LR_____, RR_____, LF_____, RF_____, Others: _____, _____			
Oven & Broiler	NA	CO ppm: Oven #1_____, Broiler #1_____, Oven #2_____, Broiler #2_____			
Clothes Dryer	NA	CO ppm: _____ Inside living space? **Y** N Vented outdoors? Y **N**			

*Mobile Home CAZ Results: ☐ Space Heater. P **F** • ☐ Water Heater. P **F** • ☐ Wood Stove/Fireplace: P **F**

(D) COMMENTS AND RECOMMENDED REPAIRS

PRE-TEST: Technician Signature: _____ Date: ____/____/____

POST-TEST: Technician Signature: _____ Date: ____/____/____

(E) CLIENT INTERVIEW *(All combustion appliances and exhaust devices off prior to Ambient CO tests.)*

E-1 How many people live in your home? # _____ • Do any large pets (dogs) live or sleep indoors? N **Y** → # _____
E-2 Which appliances burn gas? ☐-Furnace/Heater(s), ☐-W/H, ☐-Cooking, ☐-Dryer, ☐-Gas Log/Lighter, ☐-Gas F/P
E-3 Do you have more than one Furnace/Heater? #:_____ Location(s): _____
E-4 Type of gas: ☐-Natural Gas, ☐-Propane. • Do any appliances burn Oil? N Y → ☐-Furnace, _____
E-5 Have you noticed any gas odors or leaks? N **Y** → _____
E-6 Have you had have any problems with any gas (oil) appliance? N **Y** → _____
E-7 Do you use: ☐-Wood, ☐-Pellets, ☐-Coal? N **Y** → ☐-Stove, ☐-Insert, ☐-Fireplace, _____
E-8 Do you ever use a portable kerosene or gas Heater to warm any part of the house? N **Y** → **Unvented**? N **Y**
• *If ever used:* How long ago was it used? ☐-Earlier today, ☐-Yesterday, ☐-More than a day ago.
E-9 **[Gas Oven]** When was your oven used last? _____ For how long? _____
• Do you ever use your Cooktop or Oven to take the chill off? N **Y** → _____
E-10 Where is your water Heater located? _____ Do you get enough hot water? Y **N**
E-11 **[Attached Garage]** Do you park cars in the garage? N **Y** → # cars___. Is a car warmed up in the garage? N **Y**
E-12 **[FAU]** Are any rooms noticeably colder (warmer) than others? N **Y** → _____
E-13 **[FAU]** Please show me where all registers are located (and which rooms are colder/warmer). [Can check airflow during step F-3.a.]

▶ **Set conditions for *Initial* Living Space Ambient CO Test** (WIS Appendix B, Sec. 2.0 & 3.0): • All combustion appliances, air handler & exhaust devices in living space off. • Exterior doors & windows closed. • Interior doors open (*except* appliance enclosure door). • Interior Cooler Cover in place if present. • Fireplace damper closed if feasible (no fire or hot coals present).

(F) AMBIENT CO MEASUREMENTS *(Keep exhaust devices off during Ambient CO tests.)*

Record CO Tester readings and calculations in "Pre-Wx Test" column.		**Pre-Wx Test**	**References**
F-1	**(a)** Set Conditions for ***Initial*** Living Space Ambient CO Test. **(b)** Zero CO Tester outdoors ("outdoor" reading). **(c)** Draw an air sample indoors. **(d)** Record the *difference* between "outdoor" and *this* indoor CO reading (appliances & fans off).	Test Conditions set? Y Outdoor Reading: _____ ppm ***Initial*** Living Space Ambient CO: _____ ppm	*See WIS Appendix B, Item 2.0.*
F-2	Check Furnaces and Space Heaters for gas leaks prior to operating them. [If gas leak is present, STOP! See Z-1.]	Gas leaks? **Y** N NA U	*See Z-3 & WIS Item 7 for gas leaks.*
F-3	**(a)** Operate all **Furnaces & Heaters** for 5 minutes (with all other combustion appliances and exhaust devices still off), and all doors and windows unchanged. **(b)** Draw a second air sample from the same indoor location (step F-1c). **(c)** Record *difference* between this reading and the "outdoor" reading as the "***Second*** Living Space Ambient CO".	Furnaces & Space Heaters operating? Y **N** ***Second*** Living Space Ambient CO: _____ ppm [Also record at top of Section (C).]	*See WIS Appendix B, Item 3.0.*
F-4	Immediately following step F-3 (with all Furnaces/Heaters operating, fans still off, doors/windows unchanged), *check for Appliance Ambient CO for each Furnace/Heater:* **A. [FAU]** Check for CO in register nearest the Furnace. **B. [Wall, Floor, other non-ducted]** Check for CO just above the heat exchanger. (Appendix B, Step 4.3) If CO is **more than 2 ppm above** *Second* Living Space Ambient, corrective action is required. (See Z-1 and WIS Item 20)	(Show CO for each Furnace/Heater.) **Appliance** Ambient CO: _____ ppm, _____ ppm _____ ppm, _____ ppm Is *Appliance* Ambient CO **over 2 ppm higher** than Second *Living Space* Ambient CO? **Y** N	*See WIS Appendix B, Item 4.0.*

▶ **Set conditions for Appliance Testing (X-4)**: • Follow detailed instruction is **WIS Item 22.** • **Check all gas appliances**, even if one fails or cannot be completely tested. • Note that **"WIS Item"** references in CASIF are to **WIS Section 3.**

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		**Pre-Wx Test**	**Post-Wx Test**
(G) GAS HOME HEATING SYSTEM—Main Unit ☐ See Addit'l Unit Form		Location: NA U	☐ See Post-R/R Form
G-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Leaks? (Step F-2) **Y** N	Y N
G-2	**Establish *Appliance* CAS Test conditions** (different from Ambient Test conditions; see X-4 & WIS Item 22).	Conditions set for *Appliance* tests? Y	Y
G-3	Circle type of Heater (Forced Air Unit = FAU, Wall Furnace = WF, Floor Furnace = FF, Direct Vent = DV, Free Standing = FS.)	Type: FAU WF FF DV FS Other:	
G-4	Does the Heater (and air handler if an FAU) work properly? [If No, see Z-2.] FAU filter must be clean or removed (X-4.6).	Unit works properly? Y N NA U Filter: ☐ Clean, ☐ Removed, ☐ NA	Filter: ☐ Clean, ☐ Removed, ☐ NA

(G) GAS HOME HEATING SYSTEM—Main Unit (cont'd)		Pre-Wx Test	Post-Wx Test
G-5	From where does Furnace/Heater draw combustion air?	Air from: ☐ Inside, ☐ Outside	
G-6	Is Space Heater: • "Open" or "Closed" Combustion? • "Natural" or "Induced" Draft?	Combustion: ☐ Open, ☐ Closed Draft: ☐ Natural, ☐ Induced, ☐ NA	
G-7	Does Furnace/Heater share a Common Vent? [If Yes, see X-3.] Shares with: ☐ Water Heater, Other:	Common Vent? Y N U	
G-8	Drill hole for Draft Test (see X-8). If not done, check reason: ☐ No feasible location, ☐ Asbestos pipe, ☐ Double-wall pipe, ☐ Closed Combustion	Drilling test hole? Y N NA U Induced Draft: ☐ Not needed for CO	
►**CVA:** G-9 is same as I-9 for Water Heater, so G-9 is <u>not</u> needed.		G-9 blank—see I-9 → Y N NA	
G-9	Btu/hr <u>input</u> ratings of <u>Open</u> Combustion Furnace and Water Heater in this room or space (see Z-6 for Default Btu): _____ + _____ + _____ = → Calculate minimum CVA requirement (see Y-1). Use the appropriate line **(a) – (d)** below for Vent Size or Room Volume.	☐ CVA is NA (Closed Comb./DV) Total: _____ Btu/hr **Input**	☐ CVA was added, and *new total* NFVA or Room Volume is shown below. ↓
(a) _____ (# <u>Thousand</u> Btu/hr) ÷ **4** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** <u>*outdoors*</u> (1 Upper & 1 Lower).		**(a)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(a)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
(b) _____ (# <u>Thousand</u> Btu/hr) ÷ **3** = _____ **sq. in.** NFVA *required* for **1 vent** <u>*outdoors*</u> (Upper only).		**(b)** *Existing* Upper: _____ sq. in. *Existing* Lower: _____ sq. in.	**(b)** New Total NFVA: Upper:_____ sq. in.
(c) _____ (# <u>Thousand</u> Btu/hr) **x 50** = _____ **cu. ft.**, the *required* minimum **Room Volume** (if inadequate, use **(d)** below).		**(c)** *Existing* Room volume: _____ cu. ft.	**(c)** New Total Room Volume:_____ cu. ft.
(d) ☐ Vents installed, ☐ Solid door replaced by Louvered, ☐ Solid door removed _____ (# <u>Thousand</u> Btu/hr) ÷ **1** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** <u>*indoors*</u> **(min. 100 sq. in. NFVA each)**.		**(d)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(d)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
	• Is CVA OK? • Are any CVA vents obstructed? (See Z-2.)	Is CVA OK? Y **N** NA	Y **N** NA
G-10	Is there a large amount of carbon or rust present in the ☐ Heat Exchanger, ☐ Draft Hood, ☐ Flue/Vent Pipe? [If Yes, mark here and describe in (B).]	Large amount of: • Carbon? **Y** N NA U • Rust? **Y** N NA U	**Y** N NA U **Y** N NA U
G-11	Does visual inspection of Heat Exchanger show any evidence of a crack, metal fatigue, or other defect? [If Yes, see Z-1.]	Heat Exchanger visual defect? **Y** N NA U	**Y** N NA U
G-12	<u>FAU only</u>: Are there Return leaks that draw air from an Open Combustion appliance room/enclosure? [If Yes, see Z-2.]	Return leaks? **Y** N NA U	**Y** N NA U
G-13	<u>Horizontal</u> FAU: Check model # for NOx Rods (see Z-12).	Nameplate checked? Y N NA U	
G-14	Does Flue/Vent System (see Z-4) show evidence of *Immediate Service Required* <u>or</u> Required Repairs (Z-1 or Z-2).	*(After ceiling insulation, recheck vent pipes* Flue/Vent defects? **Y** N NA U	*and CVA vents in attic)* **Y** N NA U
G-15	Are there any other missing/defective items (e.g., appliance door, Combustion Chamber door, Roll-out Shield)? (See Z-2.)	Any other defects? **Y** N U	**Y** N U
G-16	To conduct CAS tests, turn on exhaust devices (X-4.3) and commonly-vented appliances (per X-3). • Turn on Furnace or Heater. • Check for Delayed Ignition and Roll-out (see Z-5).	Exhaust devices on? Y NA Delayed Ignition? **Y** N U Roll-out Ignition? **Y** N NA U	Y NA Y N U Y N NA U
G-17	Observe burner flame pattern and color. Record Large Yellow flame, Soft Lazy flame, Smothering flame, etc. (see Z-5.1.). • Other:	Large Yellow flame? **Y** N U Soft Lazy flame? **Y** N U Other problems? **Y** N U	**Y** N U **Y** N U **Y** N U
G-18	<u>FAU only</u>: When the blower comes on, is there a change in the flame pattern or color? [If Yes, see Z-5.1.]	Flame interference? **Y** N NA U	**Y** N NA U
G-19	Reinstall all access covers removed for inspection.	Covers reinstalled? Y NA	Y NA
G-20	<u>Open Door Tests</u>: After 5 minutes of burner operation, check listed items with room door <u>open</u>. • Run longer and retest if first CO is high. • If Flue Gas CO is NF, write in Appliance *Ambient CO* instead. ☐ Can't use Draft Gauge, doing "Smoke Test" (per Y-2.2.), writing in "Smoke" and circling "P" (Pass) or "F" (Fail). • Check for Spillage.→	Outdoor temperature: _____°F CO: ____, ____, ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	Temp: _____°F ____, ____, ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA

(G) GAS HOME HEATING SYSTEM—Main Unit (cont'd)		Pre-Wx Test	Post-Wx Test
G-21	Closed Door Tests: If applicable, close door to appliance enclosure or space and repeat tests (see X-7). ☐ **Can't use Draft Gauge**, doing "Smoke Test" (per Y-2.2), and writing in "Smoke" and circling "P" (Pass) or "F" (Fail). → • Check for Spillage. →	Door Closed? Y NA CO: ____, ____, ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	NA ____, ____, ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
G-22	FAU only: If burner turns off and on before room temperature reaches wall thermostat setting, note "Short Cycling". • If air in nearest register exceeds 140°F, record as Required Repair in (B), and recommend FAU not be used until corrected.	Short Cycling? **Y** N NA *If Yes, check temperature inside register nearest the FAU.* Yes—Cycles off at: _____°F	**Y** N NA Off at: _____°F
G-23	If Draft Test hole was drilled: • If Single-wall pipe, seal with "Plug Button" (or Button plus Tape). • If Double-wall, seal with Tap Bolt & High-temp Caulk. (See X-8.4 & WIS Item 23.)	Test hole sealed? Y NA ☐ Test hole NF & not drilled.	Y NA
G-24	Thermostat set to normal? • [FAU] Clean filter in place?	T'stat & Filter OK? Y **N** NA	Y **N** NA
G-25	For each additional gas Furnace/Heater present, repeat steps G-1 to G-24 using CASIF Sec. (G) Additional pages. • If NF to test 2nd Heater, reason:	Other Heater present? Y N Testing other Heater? Y N NA U	Y N NA U
G-26	*If Replacement is proposed, must give reason:* ☐ NOx Rod, ☐ Other:		

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		Pre-Wx Test	Post-Wx Test
(H) GAS LOG/LIGHTER & GAS FIREPLACE UNIT		NA	
H-1	☐ Gas Log, ☐ Gas-Fired Log Lighter, ☐ Gas Fireplace Unit • Check for gas leaks (see Z-3). • **Test Conditions set?** (X-4)	Gas leaks? **Y** N [If leaks, STOP! See Z-1.]	**Y** N
H-2a	Gas Log ☐ Is present, ☐ Is Primary Heater ☐ NA • If Primary, is damper functional & blocked open adequately? • *Not* Primary but unblocked, occupants educated? (WIS Item 30)	Primary Heater? Y N NA Damper OK? Y **N** NA Occupants educated? Y **N** NA	Y N NA Y **N** NA Y **N** NA
H-2b	Gas Log CO & Draft checks (X-9.1. & WIS Item 30). Heat ceramic logs 10 minutes; run longer and retest if first CO is high. • Perform "Smoke Test" along fireplace opening:	Gas Log: CO _____ ppm P **F** NA Visual Draft Test: P **F** NA	_____ ppm P **F** Draft P **F**
H-3	*Open* Comb. ☐ Gas Fireplace, ☐ Gas F/P Insert ☐ NA After 5 minutes operation, check CO (X-9.1. & WIS Item 31). • If Flue Gas CO is NF, measure Appliance *Ambient* CO. • Perform "Smoke Test" along top of dilution air intake opening	*Open* Comb. Gas F/P or Insert: ☐ Appl. Ambient CO—Flue gas CO is NF CO _____ ppm P **F** NA Visual Draft Test: P **F** NA U	☐ Appl. Ambient CO _____ ppm P **F** Draft P **F**
H-4	*Closed* Comb. ☐ Gas Fireplace, ☐ Gas F/P Insert ☐ NA After 5 minutes operation, check CO (X-9.1. & WIS Item 31). • If Flue Gas CO is NF, measure Appliance *Ambient* CO.	*Closed* Comb. Gas F/P or Insert: ☐ Appl. Ambient CO—Flue gas CO is NF CO _____ ppm P **F** NA	☐ Appl. Ambient CO _____ ppm P **F**

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		Pre-Wx Test	Post-Wx Test
(I) GAS WATER HEATER—Main Unit		☐ See Addit'l Unit Form NA	☐ See Post-R/R Form
I-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Gas leaks? **Y** N	**Y** N
I-2	**Establish *Appliance* CAS Test conditions** (different from Ambient Test conditions; see X-4 & WIS Item 22).	Conditions set for *Appliance* tests? Y	Y
I-3	From where does Water Heater draw combustion air?	Air from: ☐ Inside, ☐ Outside	
I-4	Is Water Heater: • "Open" or "Closed" Combustion? • "Natural" or "Induced" Draft?	Combustion: ☐ Open, ☐ Closed Draft: ☐ Natural, ☐ Induced, ☐ NA	
I-5	Does Water Heater share a Common Vent? [If Yes, see X-3.] Shares with: ☐ Furnace, Other:	Common Vent? Y N U	
I-6	Is Outer and/or Inner Combustion Chamber cover missing?	Missing: ☐ Inner, ☐ Outer, ☐ All OK	☐ Inner, ☐ Outer, ☐ OK
I-7	Mobile Home: Is floor sturdy & holding tank in a safe position?	Floor sturdy & safe? Y **N** NA	Y **N** NA

(I) GAS WATER HEATER—Main Unit (cont'd)		**Pre-Wx Test**	**Post-Wx Test**
I-8	Drill hole for Draft Test (see X-8). If not done, check reason: ☐ No feasible location, ☐ Asbestos pipe, ☐ Double-wall pipe, ☐ Closed Combustion	Drilling test hole? Y N NA Induced Draft: ☐ Not needed for CO	
▶**CVA:**	I-9 is same as G-9 for Furnace, so I-9 is not needed.	I-9 blank—see G-9 → Y N NA	
I-9	Btu/hr Input ratings of Open Combustion Water Heater and Furnace in this room or space (see Z-6 for Default Btu): _____ + _____ + _____ = → Calculate minimum CVA requirement (see Y-1). Use the appropriate line **(a) – (d)** below for Vent Size or Room Volume.	☐ CVA is NA (Closed Comb./DV) Total: _____ Btu/hr **Input**	☐ CVA was added, and *new total* NFVA or Room Volume is shown below. ↓
(a)	_____ (# Thousand Btu/hr) ÷ **4** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *outdoors* (1 Upper & 1 Lower).	**(a)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(a)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
(b)	_____ (# Thousand Btu/hr) ÷ **3** = _____ **sq. in.** NFVA *required* for **1 vent** *outdoors* (Upper only).	**(b)** *Existing* Upper: _____ sq. in. *Existing* Lower: _____ sq. in.	**(b)** New Total NFVA: Upper:_____ sq. in.
(c)	_____ (# Thousand Btu/hr) **x 50** = _____ **cu. ft.**, the *required* minimum **Room Volume** (if inadequate, use **(d)** below).	**(c)** *Existing* Room volume: _____ cu. ft.	**(c)** New Total Room Volume:_____ cu. ft.
(d)	☐ Vents installed, ☐ Solid door replaced by Louvered, ☐ Solid door removed _____ (# Thousand Btu/hr) ÷ **1** = _____ **sq. in.** NFVA *required* for *each* of **2 vents** *indoors* **(min. 100 sq. in. NFVA each)**.	**(d)** *Existing* vents NFVA Upper: _____ sq. in. Lower: _____ sq. in.	**(d)** New Total NFVA: Upper:_____ sq. in. Lower:_____ sq. in.
	• Is CVA OK? • Are any CVA vents obstructed? (See Z-2.)	Is CVA OK? Y **N** NA	Y **N** NA
I-10	Is there a large amount of carbon or rust present in the ☐ Combustion Chamber, ☐ Draft Hood, ☐ Flue or Vent Pipe? [If Yes, mark here and describe in (B).]	Large amount of: • Carbon? **Y** N NA U • Rust? **Y** N NA U	**Y** N NA U **Y** N NA U
I-11	Does Flue/Vent System (see Z-4) show evidence of *Immediate Service Required* or Required Repairs (see Z-1 or Z-2).	*(After ceiling insulation, recheck vent pipes* Flue/Vent defects? **Y** N NA U	*and CVA vents in attic)* **Y** N NA U
I-12	Conduct CAS tests. (Turn on exhaust devices on (X-4) and commonly-vented appliances (X-3). • Mark T-stat and turn it up to turn on burner.) • Look for Delayed Ignition and Roll-out (see Z-5).	Exhaust devices on? Y NA Delayed Ignition? **Y** N U Roll-out Ignition? **Y** N NA U	Y NA Y N U Y N NA U
I-13	Observe burner flame pattern and color. Record Large Yellow flame, Soft Lazy flame, Smothering flame, etc. (see Z-5.1). • Other:	Large yellow flame? **Y** N U Soft lazy flame? **Y** N U Other problems? **Y** N U	**Y** N U **Y** N U **Y** N U
I-14	Reinstall all access covers removed for inspection.	Covers reinstalled? Y NA	Y NA
I-15	Open Door Tests: After 5 minutes of burner operation, check listed items with room door open. • Run longer and retest if first CO is high. • If Flue Gas CO is NF, write in Appliance *Ambient* CO instead.] ☐ Can't use Draft Gauge, doing "Smoke Test" (per Y-2.2), writing in "Smoke" and circling "P" (Pass) or "F" (Fail). • Check for Spillage.→	Outdoor temperature: _____°F CO: ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	Temp: _____°F ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
I-16	Closed Door Tests: If applicable, close door to appliance enclosure or space and repeat tests (see X-7). ☐ **Can't use Draft Gauge**, doing "Smoke Test" (per Y-2.2), and writing in "Smoke" and circling "P" (Pass) or "F" (Fail). → • Check for Spillage. →	Door Closed? Y NA CO: ____, ____ ppm ☐ Appl. Ambient CO—Flue gas CO is NF Draft: –_____ iwc/Pa P **F** NA Spillage present? **Y** N NA	NA ____, ____ ppm –_____ iwc/Pa P **F** **Y** N NA
I-17	If Draft Test hole was drilled: • If Single-wall pipe, seal with "Plug Button" (or Button plus Tape). • If Double-wall, seal with Tap Bolt & High-temp Caulk. (See X-8.4 & WIS Item 23.)	Test hole sealed? Y NA ☐ Test hole NF & not drilled.	Y NA
I-18	Return Thermostat to original setting.	Thermostat reset? Y **N** NA	Y **N** NA
I-19	If there is a 2nd gas Water Heater present, repeat steps I-1 to I-18 using CASIF Sec. (I) Additional pages. • If NF to test 2nd Water Heater, reason:	Other Wtr Htr present? Y N Testing other Wtr Htr? Y N NA U	Y N NA U
I-20	*If Replacement is proposed, must give reason:* ☐ Leaking, ☐ Other:		

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		**Pre-Wx Test**	**Post-Wx Test**
(J) GAS COOK STOVE & OVEN/BROILER		NA	☐ See Post-R/R Form
J-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Gas leaks? **Y** N	**Y** N
J-2	Is there a kitchen exhaust vent to outdoors?	Exhausts outdoors? Y N	
J-3	Exhausts Outdoors: Is there a fan in the exhaust vent? • Does fan work satisfactorily? • Mobile Homes: See WIS Item 35 for exhaust requirement.	Fan present? Y N NA Fan works OK? Y **N** NA M/H exhaust OK? Y **N** NA	Y N NA Y **N** NA Y **N** NA
J-4	• Cooktop: With grates in place, light first burner on High for test. After 15-seconds, check CO with probe held horizontally approx. 12" above the flame (see X-9.2). • Test, turn off, light next burner and repeat. • If CO is high, clean grate or burn longer. • Griddle: Burn Griddle on high at least 5 minutes and test. →	Exhaust fans on? Y NA LR _____, RR _____ ppm CO LF _____, RF _____ ppm CO 5th Burner _____ ppm CO NA Griddle: _____ ppm CO NA	Y NA _____, _____ _____, _____ _____ Griddle: _____
J-5	Oven & Broiler: Operate burners at least 5 minutes & sample CO in exhaust stream (see X-9.2.). ▶ If 1st CO reading is high, look for dirty Oven & covered vent holes, and run 15-30 minutes longer & retest. • Single-Burner Oven: Operate on highest Bake setting or on "Broil". Record CO ppm on "Oven #1" line. • Two-Burner Oven (with Broiler burner at top of Oven): (a) Run on highest Bake setting; record on "Oven #1" line. (b) Turn to "Broil", wait 1 minute, recheck CO, put on "Broiler #1" line. • Broiler separate from Oven: Operate on "Broil" 5 to 30 minutes and check CO. Record on "Broiler" line. • Convection Oven: Check CO in Convection mode (fan on) and then in standard mode (fan off), and record the higher reading.	Vented outdoors? **Y** N (X-9.2.c) Is Oven/Broiler dirty? **Y** N Are vent holes in bottom covered by foil? **Y** N NA Oven #1: _____ ppm CO Broiler #1: _____ ppm CO Oven #2: _____ ppm CO Broiler #2: _____ ppm CO	**Y** N **Y** N **Y** N NA _____ ppm CO _____ ppm CO _____ ppm CO _____ ppm CO
J-6	*If Replacement is proposed, must give reason:*		

Circle answers in columns to the right: Y = Yes, N = No, NA = Not Applicable, U = Unverifiable. NF = Not Feasible. For Post-Wx Test, recheck all items with answers in "Post-Wx Test" column.		**Pre-Wx Test**	**Post-Wx Test**
(K) GAS CLOTHES DRYER		NA	
K-1	Check for gas leaks (see Z-3). [If leaks, STOP! See Z-1.]	Gas leaks? **Y** N	**Y** N
K-2	Is Dryer located *inside* the Living Space? (WIS Items 17 & 34) • If No, in ☐ Attached Garage, ☐ Other:	Inside Living Space?: **Y** N	
K-3	Is exhaust to outdoors needed (infiltration measures will be installed)? • Is the dryer properly exhausted to outdoors? • Does Moisture Exhaust terminate *underneath* the home?	Needs outdoor exhaust? **Y** N Exhausted outdoors? Y **N** Terminates under home? **Y** N	**Y** N Y **N** **Y** N
K-4	Does Moisture Exhaust have leaks, obstructions, improper termination, etc. that must be corrected before infiltration reduction measures are installed? [Record in CASIF (B)]	Repairs required? **Y** N NA	**Y** N NA
K-5	With exhaust devices on and lint filter clean, operate Dryer for 30 seconds on high heat setting. (WIS Item 29) • With room door open, check CO in Moisture Exhaust termination (or inside top-mount lint-screen cavity). If drum is not empty and CO is high, empty it and retest.	Filter clean? Y NA (Door Open) CO: _____ ppm	Y NA _____ ppm CO
K-6	If applicable, close door to the room where Dryer is located and again check CO.	(Door Closed) NA CO: _____ ppm	NA _____ ppm CO

(L) WRAP-UP PROCEDURE		**Pre-Wx Test**	**Post-Wx Test**
L-1	Turn off exhaust devices operated for tests.	Exhaust devices off? Y NA	Y NA
L-2	Reset thermostats to normal. [FAU] Clean filter in place?	T'stats & Filter OK? Y	Y
L-3	Make sure all appliance access panels are in place.	Panels in place? Y	Y
L-4	Seal Draft/CO test holes (See X-8.4. & WIS Item 23.)	Test hole(s) sealed? Y NA	Y NA
L-5	Transfer Final test results to Section (C) on page 1. (Transfer Post-Wx data. • When Post-Wx Tests not performed, transfer *Pre-Wx Test* data. • When both *Open* and *Closed* Door tests are performed, transfer "worst case" readings.)		Data transferred to page 1? Y

(M) COMBUSTION APPLIANCE ZONE (CAZ) TEST—DATA FORM

(Use only when CAZ Testing is required)

(1) General Instructions: (Using WIS Appendix C, Parts 5.0 to 9.0, check each appliance for which CAZ Testing is required.)

a. **Measure "Baseline Pressure"**, per Part (2) below.
b. **"Smoke" doors** (per Appendix C, Part 3.0), and perform **CAZ Pressure measurement.** Follow procedure for the Gauge being used (per Appendix C, Parts 6.0 – 8.0).
c. **For each Test Condition**, **determine the "CAZ Pressure"**, and record it in the "CAZ Pressure" column below. Circle "**–**" if Negative pressure, or "**+**" if Positive.
d. **Identify and evaluate the "Worst Case" Test Condition,** per Part (3) below.

(2) Baseline Pressure:

a. Follow instructions for the Gauge being used (Appendix C, Parts 6.0 – 8.0).
b. Measure "Baseline Pressure", record it in box to the right, and circle "**–**" or "**+**".

BASELINE PRESSURE: _____ Pa **–** **+**
(Use automatic Baseline adjustment on DG-700.)

TEST CONDITIONS	CAZ PRESSURE	WORST CASE
▶ **Test Condition "A"—Fans Only** • ***Only* Exhaust Fans/Devices On** (FAU Air Handler Off)	_____ Pa **–** **+**	☐
▶ **Test Condition "B"—Fans & Air Handler** • **Exhaust Fans/Devices** and **FAU Air Handler On**	_____ Pa **–** **+**	☐
▶ **Test Condition "C"—Air Handler Only** • ***Only* FAU Air Handler On** (Exhaust Fans/Devices Off)	_____ Pa **–** **+**	☐

(3) Evaluate "Worst Case" Condition:

a. The "Worst Case" condition is the Test Condition that causes the *greatest negative* "CAZ Pressure".
b. Mark the box ☒ for that condition in the "Worst Case" column above.
c. Compare the "Worst Case" CAZ Pressure with the HDL for the appliance being evaluated in the HDL Tables below.
   - If "Worst Case" CAZ Pressure is positive or *not more negative* than the HDL, it is a "Pass".
   - If "Worst Case" CAZ Pressure is *more negative* than the HDL, it is a "Fail", and corrective action is required before Shell Sealing measures are installed (see Appendix C, Part 9.0).

Appl. & Location: CAZ "Worst Case" = – ____ Pa • Max. HDL = – ____ Pa • ☐ Pass ☐ Fail

HDL TABLE FOR: SOLID FUEL APPLIANCES[1]	MARK ☒ THE CATEGORY BEING TESTED ↓	HDL (MAX. DEPRESS.)
Standard Fireplace[2] (unlined chimney on exterior wall)	☐	–3 Pa
Standard Fireplace[2] (metal lined, insulated, or interior chimney)	☐	–4 Pa
Standard Wood Stove or Fireplace Insert (not EPA-Certified & "Airtight")	☐	–3 Pa
Controlled-Combustion EPA-Certified Wood Stove or Fireplace Insert drawing combustion air from living space	☐	–5 Pa
Controlled-Combustion EPA-Certified Wood Stove or Fireplace Insert drawing combustion air from outdoors	☐	–10 Pa
HDL TABLE FOR: GAS- AND OIL-FIRED APPLIANCES[1]	MARK ☒ THE CATEGORY BEING TESTED ↓	HDL (MAX. DEPRESS.)
Natural Draft Water Heater only	☐	–2 Pa
Natural Draft Water Heater and Natural Draft Furnace/Boiler (common vent)	☐	–3 Pa
Natural Draft Water Heater and Induced Draft Furnace/Boiler (common vent)	☐	–5 Pa
Natural Draft Furnace/boiler only	☐	–5 Pa
Induced Draft Furnace/Boiler only	☐	–15 Pa

[1] HDL = House Depressurization Limit, the maximum allowable Depressurization in the CAZ.
[2] Open Combustion Fireplace *without* sealed glass doors and restricted air intake.